

3309 DMA

Double row angular contact ball bearing with two-piece inner ring



Double row angular contact ball bearings, with two-piece inner ring, correspond to a pair of single row angular contact ball bearings in a back-to-back arrangement, while requiring less axial space than the equivalent pair of single row angular contact ball bearings. The two-piece inner ring enables incorporation of a larger number of balls, with a larger contact angle, providing a high load carrying capacity, especially in the axial direction.

- Accommodate very high axial loads in both directions, radial loads, and tilting moments
- Suitable where a stiff bearing arrangement is required
- Separable design means outer ring with ball and cage assemblies can be mounted independently of the inner ring halves

Overview

Dimensions

Bore diameter	45 mm
Contact angle	45 °
Outside diameter	100 mm
Width	39.7 mm

Performance

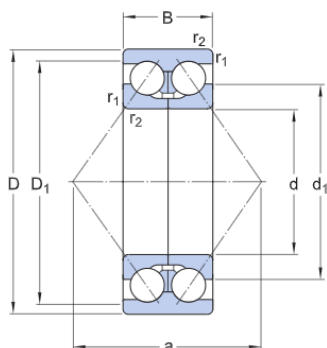
Basic dynamic load rating	79.3 kN
Basic static load rating	69.5 kN
Limiting speed	6 300 r/min
Reference speed	7 500 r/min

Properties

Arrangement of contact angle (double-row bearing)	Back-to-back (0)
Axial internal clearance	CN
Cage	Machined metal
Coating	Without
Contact type	Normal contact (two-point contact)
Locating feature, bearing outer ring	None
Lubricant	None
Matched arrangement	No
Material, bearing	Bearing steel

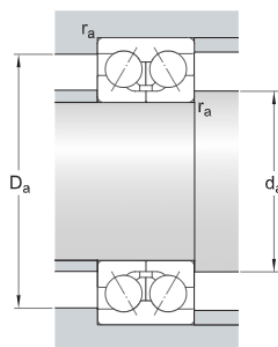
Number of rows	2
Relubrication feature	Without
Ring type	Two-piece inner ring and one-piece outer ring
Sealing	Without
Universal matching bearing	No

Technical Specification



Dimensions

d	45 mm	Bore diameter
D	100 mm	Outside diameter
B	39.7 mm	Width
d ₁	≈ 70 mm	Shoulder diameter inner ring for two-piece inner ring
D ₁	≈ 86.35 mm	Shoulder diameter outer ring
r _{1,2}	min. 1.5 mm	Chamfer dimension inner ring for two-piece inner ring
a	93 mm	Distance pressure point(s)



Abutment dimensions

d _a	min. 54 mm	Abutment diameter shaft
D _a	max. 91 mm	Abutment diameter housing
r _a	max. 1.5 mm	Fillet radius

Calculation data

Basic dynamic load rating	C	79.3 kN
Basic static load rating	C ₀	69.5 kN
Fatigue load limit	P _u	3 kN
Reference speed		7 500 r/min
Limiting speed		6 300 r/min
Calculation factor	k _r	0.095
Limiting value	e	1.34

Calculation factor	X	0.54
Calculation factor	Y_0	0.44
Calculation factor	Y_1	0.47
Calculation factor	Y_2	0.81

Mass

Mass bearing	1.63 kg
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